

**Notice of Allowability**

Application No.

10/692,972

Examiner

Elmira Mehrmanesh

Applicant(s)

CHIU ET AL.

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/06/06.
2. ☒ The allowed claim(s) is/are 1,6-13 and 15-30.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

### **DETAILED ACTION**

This action is in response to an amendment filed on December 06, 2006 for the application of Chiu et al., for a "Fail-operational global time reference in a redundant synchronous data bus system" filed October 24, 2003.

Claims 1, 8, 10, 11, 13, 15-17, 19-23, 25, 26, 29, and 30 have been amended.

Claims 2-5, and 14 have been cancelled.

Claims 1, 6-13, and 15-30 are allowed.

### ***Reasons for Allowance***

The following is an examiner's statement of reasons for allowance:

Applicant's arguments filed December 06, 2006, with respect to claims 1-30 have been fully considered and are persuasive. The previous rejections of 1-30 have been withdrawn.

After a complete search of all the relevant prior art the examiner has determined the claims are in condition for allowance. The following limitations when viewed in combination with the remainder of the claim as a whole place this application in condition for allowance.

As per claim 1, the examiner finds the novel and non obvious feature of claim 1, when read as whole to be a redundant synchronous data bus system including a first primary data bus, a second primary data bus, a first redundant data bus, and a second redundant data bus, a first plurality of timing servers cross-coupled to said first data buses and configured to receive timing synchronization signals from said second

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primary data bus; a second plurality of timing servers cross-coupled to said second data buses and configured to receive timing synchronization signals from said first primary data bus each of the first and second plurality of timing servers including a counter; and a unique constant stored in each timing server, wherein each said timing server is configured to transmit, receive and monitor synchronization signals from each of said first and second pluralities of timing servers, each said counter is responsive to the failure of the timing master to initiate counting from a starting point to count toward each respective stored unique constant, and each said timing server is further configured to transmit a master timing synchronization signal when said counter in said timing server has completed counting to said unique constant stored in said timing server.

As per claim 8, the examiner finds the novel and non obvious feature of claim 8, when read as whole to be a second module configured to store a unique constant; and a third module configured to independently and automatically select one or more timing servers from among the at least one plurality of timing servers to be timing master based at least partially upon a relationship among unique constants associated with each timing server and upon said synchronization signals received from one or more of said timing servers of said at least one plurality of timing servers, the third module further configured to include a counter, and in response to a monitored failure of the timing master, to initiate counting from a starting point toward the unique constant, the third module initiating the transmission of a master timing synchronization signal when the counter has completed counting to the unique constant.

As per claims 11 and 15, the examiner finds the novel and non obvious feature of claims 11 and 15, when read as whole to be wherein each said timing server of the at least one plurality of timing servers is further configured to count toward a unique predetermined constant in response to detection of a failure of a timing master synchronization signal to which said each timing server is synchronized; if no other timing master synchronization signal is received before said counting reaches said unique predetermined constant, transmitting a replacement timing master synchronization signal; and if the other timing master synchronization signal is received before said counting reaches said unique predetermined value, synchronizing to the other timing master synchronization signal.

As per claim 19, the examiner finds the novel and non obvious feature of claim 19, when read as whole to be counting toward a unique constant in response to detecting a failure said timing master synchronization signal in said monitoring step; and synchronizing to a second remote timing server as timing master if a second timing master synchronization signal is received from said second remote timing server during the counting step and otherwise transmitting a replacement, timing master synchronization signal.

As per claim 29, the examiner finds the novel and non obvious feature of claim 29, when read as whole to be initiating a counter to count toward the unique, constant in

response to detection of a failure of a received timing master synchronization signal to which said each timing server is synchronized; if no other timing master synchronization signal is received before said counting reaches said unique constant, transmitting a replacement timing master synchronization signal; if the other timing master synchronization signal is received before said counting reaches said unique predetermined value, synchronizing to the other timing master synchronization signal.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elmira Mehrmanesh whose telephone number is (571) 272-5531. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W. Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
ROBERT BEAUSOLIEL  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100